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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/721,638	11/27/2000	Takayuki Takemoto	D-1026	3831

7590 02/26/2004

KANESAKA AND TAKEUCHI
1423 Powhatan Street
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EXAMINER

CZEKAJ, DAVID J

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 02/26/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/721,638

Applicant(s)

TAKEMOTO, TAKAYUKI

Examiner

Dave Czekaj

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al. (6163029), (hereinafter referred to as "Yamada") in view of Hallock (4531154).

Regarding claims 1-2, Yamada discloses an apparatus for improving fluoroscopy image quality and reducing signal noise (Yamada: column 1, lines 7-11). This apparatus comprises a "two-dimensional radiation sensor array formed of photoelectric conversion elements for outputting charge signals corresponding to an amount of radiation" (Yamada: figures 1 and 8, column 8, lines 29-32, wherein the two-dimensional matrix is the matrix of 1000x1000 elements), "switches arranged in a matrix form under the radiation sensory arrays and connected to the photoelectric conversion elements" (Yamada: column 8, lines 32-34, wherein the switches are the TFT's which are arranged under each of the photoelectric conversion elements, thus putting them in a matrix form), "a gate driver circuit connected to the switches for turning on the respective switches in case of readout out the signals" (Yamada: column 8, lines 34-35, figure 8, item 45), and "a readout amplifying circuit connected to the sensor arrays for readout

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of the charge signals" (Yamada: figure 8, item 47, wherein the readout amplifying circuit is the initial stage integration amplifiers). Although not shown, it would have been obvious to implement a control circuit connected to the gate driver and amplifying circuit for controlling them to join pixels as one pixel unit as seen in Huang (Official Notice). Doing so would have been obvious in order to make the fluoroscopy image apparatus more power efficient by being able to control and select individual sensors. However, this apparatus lacks the TV reference signal circuit and picture signal superimposing circuits as claimed. Hallock teaches that horizontal and vertical sync inputs are needed to correctly display a video image (Hallock: column 3, lines 55-61). Hallock discloses an apparatus that superimposes a graphic over video using a "superimposing circuit" (Hallock: figure 1, item 150, wherein the superimposing circuit is the video display processor) and a "TV reference signal circuit" (Hallock: figure 1, wherein the TV reference circuit is comprised of items 110, 120, and 140 which generates horizontal and vertical syncs). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to take the apparatus disclosed by Yamada and add the TV reference and superimposing circuits taught by Hallock in order to obtain an apparatus that correctly displays video data on a display.

Regarding claim 3, Hallock discloses that the "control means are included in the TV reference signal circuit to be operated in analogue video control"

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(Hallock: figure 1, wherein the TV reference circuit is comprised of items 110, 120, and 140).

Regarding claim 4, although not shown, it would have been obvious to included wireless transmitting means for transmitting the signal as seen in MeEvoy et al. (Official Notice). Doing so would have been obvious in order to make the apparatus more mobile.

Regarding claim 5, Yamada discloses a "digital-to-analog switching circuit to be able to switch between digital and analog video" (Yamada: column 9, lines 41-49, wherein the digital to analog conversion is performed by the ADC).

Regarding claim 6, Yamada discloses a "correction processing circuit connected to the amplifier so that sensitivity and offset correction are carried out" (Yamada: figure 11, items 89 and 91, wherein the sensitivity is corrected by the gain circuit).

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US-5666395	09-1997	Tsukamoto et al.
US-5509044	04-1996	Horbaschek, Heinz
US-5852296	12-1998	Tsukamoto et al.
US-2002/0191828	12-2002	Colbeth et al.
US-6330303	12-2001	Yumane et al.
US-6232607	05-2001	Huang, Zhong Shou

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US-6044131 03-2000 McEvoy et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dave Czekaj whose telephone number is (703) 305-3418. The examiner can normally be reached on Monday - Friday 9 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (703) 305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


CHRIS KELLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600